

*Stated Meeting, September 21.*

Present, twenty-four members.

Dr. DUNGLISON, Vice-President, in the Chair.

Letters were read:—

From Dr. Robert E. Rogers, dated Boston, Aug. 31, 1855, acknowledging the receipt of notice of his election as a member of the Society:—

From the Imperial Society of Naturalists of Moscow, dated 24th July, 1855, announcing that the said Society will celebrate the fiftieth anniversary of its existence, by a formal and extraordinary session on the 23d of December next: and—

From the Proprietors of the Bowditch Library, dated Boston, Sept. 15, 1855, returning thanks for Nos. 47 to 53, of the Proceedings of this Society.

The following donations were announced:—

#### FOR THE LIBRARY.

Report of the Commissioner of Patents, for the year 1854. *Arts and Manufactures*. Vols. 1, 2. Washington. 8vo.—*From the U. S. Patent Office*.

Smithsonian Contributions to Knowledge. Vol. VII. Washington, 1855. 4to.—*From the Smithsonian Institution*.

Proceedings of the Boston Society of Natural History. Vol. V. No. 13. July, 1855. Boston, 8vo.—*From the Society*.

Proceedings of the Academy of Natural Sciences of Philadelphia. Vol. VII. No. 10. Philadelphia. 8vo.—*From the Academy*.

Journal of the Franklin Institute. 3d Series. Vol. XXX. No. 3. Sept. 1855. Philadelphia. 8vo.—*From the Institute*.

Monthly Notices of the Royal Astronomical Society. Vol. XV. No. 8. June, 1855. London. 8vo.—*From the Society*.

African Repository. Vol. XXXI. No. 9. Sept. 1855. Washington. 8vo.—*From the Am. Colonization Society*.

Revue de Paris: Feb. 1, to July 1, 1855. Paris. 8vo.—*From M. Hector Bossange*.

American Journal of Science and Arts. 2d Series. Vol. XX. No. 59. Sept. 1855. New Haven. 8vo.—*From the Editors*.

The Medical News and Library. Vol. XIII. No. 153. Sept. 1855. Philadelphia. 8vo.—*From Messrs. Blanchard & Lea.*

Astronomical Journal. Vol. IV. Nos. 14, 15. Sept. 5, 19, 1855. Cambridge. 4to.—*From the Editor.*

Official Army Register, corrected, to August 1, 1855. Washington. 8vo.

Rifle and Light Infantry Tactics; for the Exercise and Manœuvres of Troops when acting as Light Infantry or Riflemen: prepared under the direction of the War Department, by Brevet Lt. Col. W. J. Hardee, U. S. Army. 2 vols. Philadelphia. 12mo.—*From Major Hartman Bache.*

On the Resolution of Numerical Equations. By A. Vallas, Art. and Philos. Doct. &c. New York, 1855. 8vo.—*Donor unknown.*

Description of a New Mollusk from the Red Sandstone near Pottsville, Pennsylvania. By Isaac Lea. (Proc. Acad. Nat. Sci. May, 1855.) 8vo.—*From the Author.*

Remarks on the Penal System of Pennsylvania, particularly with reference to County Prisons. By William Parker Foulke, of Philadelphia. Philadelphia, 1855. 8vo.—*From J. J. Barclay, Esq.*

Prize Essays on Juvenile Delinquency. Published under the direction of the Board of Managers of the House of Refuge. Philadelphia, 1855. 8vo.—*From the same.*

Historical Sketches of the Formation and Founders of the Philadelphia Hose Company: being the first Hose Company instituted in the City of Philadelphia, Dec. 15, 1803:—with a list of the Members. Philadelphia, 1854. 8vo.—*From Richard Vaux, Esq.*

The Florist and Horticultural Journal. Vol. IV. No. 6, 7. Philadelphia, 1855. 8vo.—*From the Editor.*

Dr. Franklin Bache announced the decease of Col. C. C. Biddle, a member of the Society, who died August 20, 1855, in the 70th year of his age:—Whereupon, Mr. Ord was, on motion, requested to prepare an obituary notice of the deceased member.

Mr. Du Bois laid upon the table specimens of the metal *aluminum*, accompanied by the following communication.

Messrs. Eckfeldt and Du Bois, Assayers of the Mint, offer for the examination of the Society, two specimens of “the new French silver,” or *aluminum*; one of which is in lump, and the other rolled

out; also lumps of silver and lead, of nearly equal bulk, for the sake of showing the relative colour and weight.

While this is not strictly a new metal (having been discovered by Wöhler in 1828), its production by a new process, and upon a comparatively large scale, by M. Deville, and the developement of its remarkable properties, have given it, in France, all the *éclat* of a fresh discovery. Although it has been exhibited *in ingots*, at the Academy of Sciences, it is still held at a price little less than that of pure gold; but the chemists of Europe, who take the liveliest interest in this subject, expect to cheapen the process of manufacturing the metal from its earthy oxide (alumina), by the agency of galvanism.

We are engaged in investigating its behaviour in the acids, and in the fire, and in other circumstances, and will probably make a more extended notice, at a future meeting of the Society.

Meanwhile, it must certainly excite the interest of any one, accustomed to consider *heaviness*, or high specific gravity, as an invaluable characteristic of metals, to take hold of a metal, just coming into the market, which is only one-fourth as heavy as standard silver. Its specific gravity is reported at 2.6; we find this specimen to be 2.7; but it is said there is an admixture of about five per cent. of iron, which is as pure as it has yet been obtained, by the new process.

Dr. Farnum informs us that it is already in use for making fine balances, for which purpose, as well as for small weights, it must prove invaluable. No doubt it will also be in request for other branches of art, if the price can be brought down, as some anticipate, to 50 cents a pound; or even to 50 cents an ounce, which is a more reasonable expectation. Every bed or bank of clay, whether the potter's or brickmaker's, is a mine of aluminum in which there is present from ten to twenty per cent. of the metal; but the abundance of the ore is met by the difficulty and expense of its extraction.

So very desirable is it to have a light substitute for the copper *cent*, in currency, that it has occurred to us as possible, or probable, that eventually this substitute will be found in aluminum, pure or alloyed. This probability is the principal incentive to our own investigations.

Should the market price ever come down to 50 cents an ounce troy (for example), a coin of aluminum, about as large as our dime (that is, in *bulk*, not in weight), could be afforded for one cent. Its extreme lightness would make it convenient to carry about, and would prevent its being confounded with silver money.

The following preamble and resolution were offered by Mr. Fraley:—

Whereas, a motion was unanimously agreed to at the last stated meeting of the Society, by which the Committee appointed on the 19th of January last, on the subject of a sale or exchange of the Society's Hall, were "authorized and empowered to negotiate terms and make a sale of the Hall on certain conditions, with such stipulations and agreements as they may deem necessary and proper for the due security and interest of the Society :"—

Be it therefore resolved, by this meeting (in compliance with the laws of the Society, Chapter IX. Article 3), that the action of the Society, at its last meeting, with regard to a sale of the Hall, is hereby approved and confirmed.

Which preamble and resolution were read, considered and unanimously adopted on the call of the *yeas* and *nays* of the members present.

On motion, the librarian was authorized to purchase a copy of Scott's new map of the consolidated city of Philadelphia, for the use of the Society.

The librarian reported that the coins lent to Dr. Caspar Morris, in pursuance of an order adopted at the last meeting, had been safely returned to the Cabinet of the Society.

*Stated Meeting, October 5.*

Present, fifteen members.

Prof. FRAZER, Vice-President, in the Chair.

Dr. Robert E. Rogers, a recently elected member, was introduced, and took his seat.

A letter was read from M. Michel Chevalier, dated Paris, Aug. 9, 1855, accompanying a donation for the library.

The following donations were announced:—

FOR THE LIBRARY.

Proceedings of the American Academy of Arts and Sciences. Vol. III. No. 14. Boston, 1855. *From the Academy.*